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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 09/773,806 | 02/01/2001 | Aldan J. Pohlmeier | SC11555TS | 8241 |
| 23125 | 7590 | 09/27/2004 | EXAMINER | |
| FREESCALE SEMICONDUCTOR, INC. LAW DEPARTMENT 7700 WEST PARMER LANE MD:TX32/PL02 AUSTIN, TX 78729 | | | PATEL, JAY P | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2666 | |

DATE MAILED: 09/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 09/773,806 | POHLMAYER ET AL. | |
| | Examiner | Art Unit | |
| | Jay P. Patel | 2666 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,18- 21 is/are rejected.
- 7) ☒ Claim(s) 2-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections - Informalities

1. Claims 2 through 17, 19 and 20 are objected to because of the following informalities: The above mentioned claims provide further limitations for a method or an apparatus of either a dependent or an independent claim which they depend on; therefore, the above mentioned claims must start with "the" instead of "a" or "an".

Appropriate correction is required.

2. Claim 20 is objected to because of the following informalities: Claim 20 is dependent on independent claim 18 which specifies limitations of an apparatus, claim 20 however specifies a limitation of a method.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

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and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 18 are rejected under 35 U.S.C 103(a) as being unpatentable over Buchholz et al. (U.S. Patent 5517505) in view of Boehmer et al. (U.S. Patent 5892927).

5. Regarding claims 1 and 18, Buchholz discloses the first two limitations of claims, 1 and 18, which are the detection, or the means of detecting the start of frame, and determining or the means for determining its length. Buchholz discloses that primarily, the beginning of each frame and timeslots within the frame must be identified (column 1 lines 66 and 67). Buchholz also provides a means to accomplish this task; "Such identification can be accomplished by transmitting a known data pattern for predetermined number of bits" (column 2 lines 1 through 3). Reference further discloses that once the receiving terminal recognizes a pattern, the beginning of frame is determined (column 2 lines 3 and 4). Buchholz fails to teach however, the further limitations of detecting or a means for detecting a start of synchronization field, determining or a means for determining a length of the adjusted synchronization field and determining or a means of determining if this length is less than the length of the start of frame symbol.

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Boehmer discloses all the limitations of claims 1 and 18 that Buchholz fails to teach. Boehmer discloses that based on the transmitted symbol, the delay circuitry selects the length of the symbol according to bus specifications. Refer to, "the stored propagation delay is subtracted from the nominal length of the symbol" (column 2 lines 13 through 20). Boehmer teaches the limitation of initiating a synchronization field and discloses an apparatus to adjust its length and determine the new length. Therefore, it is obvious to one skilled in the art at the time the invention was made, that after detection of the start of frame, if the system is modified to include a module to initiate synchronization and a module for timing delay compensation, then an adjusted synchronization can be properly achieved. Furthermore, if the synchronization field is properly compensated for the delay, the length of the adjusted synchronization field will always be less than that of the initiated synchronization. The proper motivation for one who is skilled in the art can be provided by the abstract section of Buchholz et al. where it is disclosed that the difference between the time stamps in combination with the delays can be used by the user terminal (slave node) to adjust synchronization at the control terminal (master node).

6. Claims 19 and 20 are rejected under 35 U.S.C 103(a) as being unpatentable over Buchholz et al. (U.S. Patent 5517505) in view of Boehmer et al. (U.S. Patent 5892927) in further view of Garg (U.S. US Patent 6771611 B1).

Since claims 19 and 20 are dependent on independent claim 18, they contain all the limitations of claim 18; therefore, the references used to reject claim 18 are also pertinent to claims 19 and 20 in addition to any additional

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references used. Buchholz et al. and Boehmer et al. fail to disclose a means for determining a baud rate of the communication bus and do not disclose a character-oriented protocol.

Garg discloses a frame generation circuit and method and discloses a means for providing a baud rate and discloses that communication protocols can be used for communicating data between network devices. Regarding claim 19, the reference discloses a mapper module within the circuit that can operate at multiple baud rates (column 3 line 18). The reference further discloses that the signal to a media access controller may provide for a data rate, which corresponds to the baud rate (column 3 lines 19 through 21).

Regarding claim 20, the reference discloses that a plurality of network devices which are coupled to data ports can communicate with other such devices by utilizing predefined data communication protocols (column 4 line 26 through 32).

Therefore, it would be obvious to one skilled in the art at the time the invention was made, that if the limitations specified by Buchholz and Boehmer be combined with those disclosed by Garg, a baud rate can be determined and a data communication protocol can be utilized to transfer data between the control (master) and user (slave) units. The proper motivation comes from Garg's background of the invention section that based on recognized standards for cost, power and size reductions, a device and method for frame generation is needed to which overcomes the disadvantages of known systems (column 2 lines 32 through 35).

7. Claim 21 is rejected under 35 U.S.C 103(a) as being unpatentable over Boehmer et al. (U.S. Patent 5,892,927) in view of Miki et al. (U.S. Publication 2003/0189954).

8. Regarding claim 21, Boehmer discloses a network, which has two basic components, related to data encoding and decoding (column 3 paragraph 2). These components are a transceiver and a micro-controller. It is specified that the transceiver be interfaced between the micro-controller and a bus, such as a J1850 bus. Boehmer discloses that if this bus is indeed used, the micro-controller and the transceiver should be capable of encoding and decoding incoming data. Once the data is encoded and decoded, the start of frame can be detected on the bus. Boehmer later discloses a transceiver, which reverses the wave shaping of the received time dependent symbols (column 3 lines 50 through 59). The reference also states that because of an inherent propagation delay, the width of the received symbol could be different from the transmitted symbol. The circuitry disclosed by Boehmer is present to determine the length of the start of frame.

Boehmer discloses a delay compensation circuit to adjust symbols from a symbol encoder (Column 8 lines 43 through 55). The delay compensation circuit further comprises of a clocking signal to time the length of the symbols.

Boehmer clearly discloses a component in the circuitry to measure the length of the adjusted symbols (column 8 lines 50 through 55). Boehmer discloses that the user can send the total propagation delay over a bus, which writes the value

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to a register (column 9 lines 60 through 66, continued on to the next column until the end of the paragraph). The register then sends the value to the delay compensation circuit, which uses the value to compensate the timing of the encoded symbols. In order to properly compensate for the delay, the circuit must compare the length of the adjusted symbols with the length of the encoded symbols. Furthermore, if the length of the adjusted data frame is less than that of the encoded data frame, a start of frame and synchronization are valid; otherwise, the delay compensation circuitry serves no purpose. Boehmer et al. disclose all the limitations of claim 21 except the circuitry to detect the start of synchronization field.

Miki et al. disclose a circuitry for detecting a start of synchronization field. Miki specifically discloses a frame synchronization circuit, which is applied to a transmission system of a fixed length frame (page 1, column 2 paragraph 12). The reference further discloses that the received data from the input terminal is sent to a unique word detector. Within the word detector, an input buffer buffers the data and cuts out data into segments of unique word length and then sends the segments to a comparator. It would be obvious to one skilled in the art at the time the invention was made, that if the circuitry specified by Miki et al. be properly embedded into the circuitry specified by Boehmer et al., an apparatus for the applicant's operation can be built. The proper motivation comes from Boehmer's abstract section that depending on the protocol of the user's interface and symbol transmission, proper delay compensation can be accounted for so that successive symbols can be properly timed.

Claim Allowance

9. Claims 2 through 17 are objected to as being dependent upon a rejected base claim 1, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Jay P. Patel
Examiner
Art Unit 2666

Seema S. Rao
SEEMA S. RAO 9/22/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800